# UNDERGROUND SOLUTIONS YOU CAN RELY ON, **BRANDS YOU CAN TRUST**





# **PERMACAST® HD TRAILER**

The Permacast<sup>®</sup> HD Trailer is a complete cementitious repair system for underground structures. With this system, you have the ability to line 100 -125 vertical feet of manholes daily, using a patented, bi-directional, no-entry SpinCaster™, saving you time in the field.

# **BI-DIRECTIONAL MANHOLE SPINCASTER™**

The Bi-directional Manhole SpinCaster™ rotates clockwise and counterclockwise to ensure even applications of Permacast® repair mortars through the 360-degree casting process. The SpinCaster™ attaches to 1-inch material hoses with quick connect fittings and is lowered up and down within vertical shafts via a connection to a retrieval winch.



### **BI-DIRECTIONAL HORIZONTAL SPINCASTER™**

The Bi-directional Horizontal SpinCaster™ rotates clockwise and counterclockwise to ensure even applications of CentriPipe® repair mortars through the 360-degree casting process in pipe. The range of application are diameters 30 inches up to 120 inches. The SpinCaster™ connects directly to 1.5inch shotcrete hose with standard hose clamps and retrieved via sled with our CentriPipe® retrieval system.

# HYPER-BLAST SPIN WASHER

The Hyper-Blast Spin Washer makes quick work of cleaning sewer structures to prepare for interior coatings or linings. Biosolids, laitance, debris and deteriorated concrete is blasted away, leaving a clean, sound substrate.





### **CITY SELF-INSTALL PROGRAM**

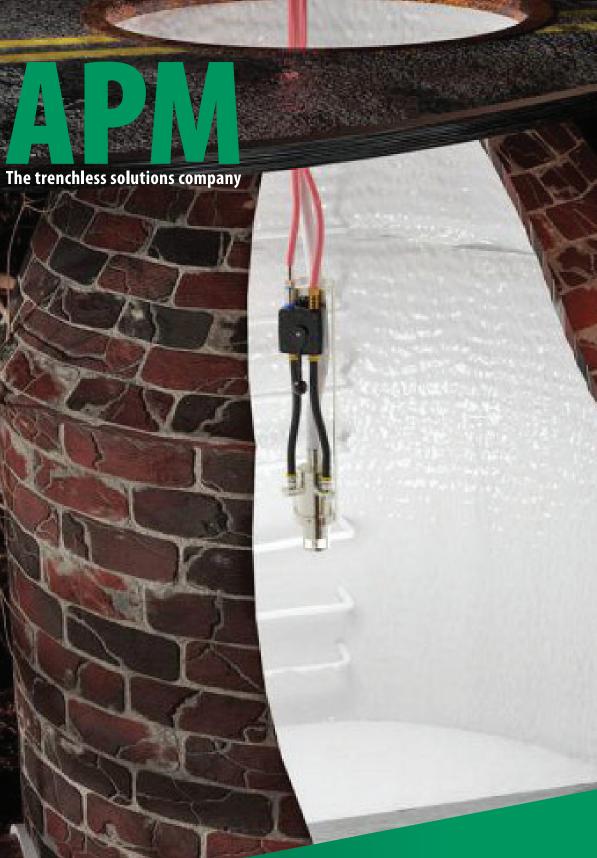
For cities with sufficient manpower, the City Self-Install Program for sanitary and storm manholes and catch basins is a dollar-saving choice. Factory training and our bi-directional SpinCaster™ enable a 3-person city crew to reinforce, seal and protect four to eight structures



# **Waterline Renewal Technologies**

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# **CENTRIPIPE®**

The CentriPipe® system is designed for corrosion protection and complete structural renewal of storm and sanitary sewer pipes between 30" – 120" in diameter. It is a centrifugally cast concrete pipe system that provides a seamless, high-strength, fully structural pipe. CentriPipe<sup>®</sup> can be applied to concrete, clay, metal and brick culverts

#### **PERMACAST® MORTARS**

Permacast<sup>®</sup> Structural Liners are made of specially formulated, fiber-reinforced cements engineered for underground sewer structures.

Mortar Products: MS-10,000 · MS-10,000 with CONSHIELD® · CR-9,000 · CR-9,000QS · PL-8,000 · PL-8000D · PL-12,000 · COR+ROC<sup>®</sup> · Cor+Gard<sup>®</sup> EPM



Advantages: Uniform application · Densely compacted · Safe operation · Precise thickness



#### **PERMAFORM® REPLACEMENT**

Permaform® Replacement involves pouring a new concrete manhole fully within the existing manhole. It permits the internal assembly of steel forms conforming to the interior dimensions rising through the eccentric or concentric cone or flat top then vibrating high-strength concrete into the three-inch annulus between the forms and the old wall thus building a new manhole within the old.

### **COR+GARD® COATINGS**

The COR+GARD® family of coatings provide chemical protection against biogenic corrosion caused by industrial waste. Application is easy, and the coatings are highly resistant to a wide range of acids and temperatures.

COR+GARD® Products: COR+GARD® • Cor+Gard® 301 • Cor+Gard® 401 • Channel Line • Cor+Gard® B4 Primer



#### **CONSHIELD®**

CONSHIELD® HD is an EPA-registered anti-bacterial agent that is proven to prevent MIC because it inhibits T. bacteria growth in sanitary sewer structures. It molecularly bonds to the concrete matrix and is throughout the entire thickness of the structure. It cannot wash off, peel off, delaminate or pinhole.

#### COR+ROC<sup>®</sup> COATINGS

COR+ROC<sup>®</sup> is a two-component epoxy-based polymer liner that is applied through our bi-directional Spincaster<sup>™</sup>. The liner sets in 30-45 minutes.

Advantages: Structural shell reinforcement · Surface can be damp/wet · Thickness is easily verified with a wet gauge · Bonds well to substrate · Corrosion proof





#### PERMACAST<sup>®</sup> CLEANER

Permacast® Cleaner is a non-acid cement remover that is non-hazardous to equipment, noncorrosive to paints, biodegradable and cost-effective.

#### **COR+GARD® FLEX-JOINT**

COR+GARD<sup>®</sup> Flex-Joint is a flexible adhesive sealant that can be used with a variety of substrates such as pre-cast joints, manhole frames, adjusting rings and pipe penetrations. It will remain flexible to -40° F, is weather and corrosion-resistant, cures quickly, contains no solvents or isocyanates and is non-yellowing.



### PERMACAST<sup>®</sup> WATERPROOFING

APM offers multiple waterproof mortar options.

Permacast® Patch: A one-component, easy-to-use, fast-setting, shrinkage-compensated repair material that achieves 3000 psi strength in 3 hours.

Permacast® Plug: A rapid-set, hydraulic cement-based repair material that can be used for underwater repair or to stop water seepage through concrete.

#### SEALANTS

APM offers multiple sealant options.

Crystal-X<sup>®</sup>: Seals out water, binds back dust, hardens and enhances the surface to resist abrasion.

COR+GARD® Flex-Joint: A flexible adhesive sealant that can be used with a variety of substrates such as pre-cast joints, manhole frames, adjusting rings and pipe penetrations.

CS Identifier: Used to identify the use of ConShield® in concrete for protection against MIC.

1315 Sealer: 1315 Sealer is a penetrator/sealer used for curing and sealing exposed aggregate concrete surfaces, precast concrete, mortar, stone, rock face, tilt up, stucco, etc. 1315 Sealer is applied as a protective seal coat and provides protection against abrasion and chemical attack. 1315 Sealer will protect concrete surfaces against discoloration due to staining from efflorescence, dust, air pollutants and spillage of common chemicals. 1315 Sealer may be used as a cure and seal on concrete surfaces that will be subject to abrasion and spillage of common chemicals.









